REMARKS

In the Office Action of July 2, 2003, the Examiner objected to the title of the invention and rejected claims 1-27 based on various combinations of a number of U.S. patents. In particular, the Examiner rejected claims 1, 6, and 7 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,418,492 to Papa et al. ("Papa"); rejected claims 2, 3, 8, 10, 12, 13, 18, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Papa in view of U.S. Patent No. 6,062,480 to Evoy ("Evoy"); and rejected claims 4, 5, 9, 15, 16, 20, 21, 24, 25, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Papa in view of U.S. Patent No. 6,170,028 to Wallach et al. ("Wallach").

By this Amendment, Applicants have amended the title and added new claims 28-31. Additionally, Applicants have amended claims 1-13, 15, 17-19, 21-23, and 27 for form. New claims 28-31 further define the features of independent claims 1, 11, 17, and 21. Support for these new claims can be found at page 10 of the originally filed specification.

In response to the Examiner's objection to the title as not being descriptive, Applicants have amended the title. Applicants submit that the current title, as amended, is sufficiently descriptive.

Claims 1, 6, and 7 were rejected by the Examiner under 35 U.S.C. § 102(e) based on Papa. Applicants respectfully traverse this rejection.

Papa is directed to a computer system with hot-swap and hot-add capabilities. A hardware perspective of an exemplary hot-swapping device is shown in Fig. 1 of Papa. (Papa, col. 5, lines 55 and 56). According to Papa, once a hot-swap request is generated, a "power-down" command is sent to sequencer 126. (Papa, col. 6, lines 8-9). In response to receiving the "power-down" command, the sequencer 126 controls the quick switch 142, the reset line 146, and the power control 138. (Papa, col. 6, lines 21-24). The operation of power control 138, in

particular, is described at a number of places in Papa, including column 6, lines 43-47 (power-down) and column 7, lines 4-7 (power up).

Claim 1 is directed to a device including slots for a plurality of hot-swappable physical interface cards. The device includes, *inter alia*, an interface designed to receive the physical interface cards, a plurality of power supply lines, an on/off power control circuit connected to the plurality of power supply lines to control power supplied to the power supply lines, and a controller connected to the on/off power control circuit. The controller, in response to detecting the presence of the physical interface card in the interface, instructs the on/off power control circuit to turn on the plurality of power supply lines and ramp the power supplied to each one of the turned on power supply lines.

In contrast to the Examiner's assertion, Papa does not disclose each feature recited in claim 1. Papa, for example, does not disclose "a plurality of power supply lines for supplying power from the device to the physical interface card though the interface," as recited in claim 1. Papa does disclose a power controller 138 that receives a power signal "PWR." (Papa, Fig. 1). Further, Papa states that "power control supplies power to each of card slots 150-152 via respectively, power lines 170-172." (Papa, col. 5, lines 37-38 and col. 8, lines 64-66). As shown in Fig.1, each of power lines 170-172 appears to be a single power line that supplies power to different card slots 150-152. Thus, Applicants submit that Papa does not disclose a plurality of power supply lines, as recited in claim 1, for supplying power to a physical interface card. If anything, by disclosing a single power line 170-172 for each of a number of different card slots 150-152, Papa appears to teach away from the invention recited in claim 1.

In addressing the feature relating to a plurality of supply lines recited in claim 1, the Examiner points to Fig. 1 and col. 5, lines 22-45, of Papa. (See Office Action, page 3). This section of Papa, however, as explained above, discloses that a power line 170-172 is connected

to each of card slots 150-152. This section of Papa, however, does not disclose or suggest a plurality of power supply lines for supplying power to a physical interface card.

Claim 1 additionally recites that "a controller connected to the on/off power control circuit, the controller, in response to detecting the presence of the physical interface card in the interface, instructing the on/off power control circuit to turn on the plurality of power supply lines and to ramp the power supplied to each one of the turned on power supply lines." (emphasis added). Applicants respectfully submit that Papa completely fails to disclose or suggest this aspect of claim 1. An example of ramping a plurality of voltages is shown in Fig. 6 of the pending specification. As noted in the specification, by ramping the supplied voltage, a more stable on/off procedure can be achieved. (Spec., page 11).

The Examiner points to col. 6, lines 4-65 of Papa as allegedly disclosing the controller recited in claim 1. This section of Papa discusses, among other things, the "power-down" command of Papa. In particular, in regard to the power-down command, Papa discloses:

> The "power-down" command originates from processor 102 operating under the control of program code for hot-swap and hot-add 98. In an embodiment the "power-down" command is passed from the CPU 102 to the sequencer 126 via the PCI bus 124. In another embodiment the "power-down" command is passed to the sequencer via an alternate signal control path not shown.

(Papa, col. 6, lines 9-16). Papa further discloses:

> The sequencer sends the power-down command to the power control 138. The power control in response removes power from the slot 150 and LED 166. The power control monitors power-down and when power has been removed from the slot sends a "Done" signal to the sequencer.

(Papa, col. 6, lines 44-46). Although these sections of Papa generally disclose implementing a power-down command and monitoring when power has been removed, nothing in this section of Papa, or any other section of Papa, discloses or suggests ramping power supplies as recited in claim 1.

For at least these reasons, Applicants submit that the rejection of claim 1 based on Papa is improper and should be withdrawn. The rejections of claims 6 and 7, at least by virtue of their dependency on claim 1, are also improper and should be withdrawn.

The Examiner further rejected claims 11, 14, and 17 under 35 U.S.C. § 103(a) based on Papa. (Office Action, page 6). Applicants respectfully traverse this rejection.

In rejecting independent claim 11, the Examiner's rationale is similar to that applied to claim 1, except that the Examiner additionally concedes that Papa does not disclose a router. That Examiner contends, however, that one skilled in the art would have found this obvious. (Office Action, page 7). Applicants note that the term "router" has been removed from amended claim 11.

Claim 11, as amended, is directed to a method including detecting an electrical connection of an interface card to a device and turning on each of a plurality of power lines in the packet forwarding engine that lead to the interface card. The method further recites that each of the plurality of power lines is turned on by ramping a power supply to a predetermined maximum voltage value over a predetermined time period. Claim 11 further recites that larger predetermined maximum voltage values are ramped over a longer predetermined time period.

Applicants submit that Papa fails to disclose or suggest many of the features recited in claim 11. As discussed above, for example, Papa does not disclose or suggest a plurality of power lines that lead to an interface card. As further discussed above, Papa also does not disclose or suggest turning on the plurality of power supply lines by ramping the power supplied, much less ramping the power supplied to a predetermined maximum voltage value over a predetermined time period. Because Papa does not disclose ramping the power supply values, Papa could not possibly disclose or suggest that larger predetermined maximum voltage values are ramped over a longer predetermined time period, as is also recited in claim 11.

For at least these reasons, Applicants submit that Papa fails to disclose or suggest many of the features recited in claim 11. Accordingly, the rejection of this claim should be withdrawn. The rejection of claim 14 should also be withdrawn at least by virtue of its dependency on claim 11.

Claim 17 is directed to a method of responding to the removal of an interface card from a physical interface of a device. The method includes, *inter alia,* turning off each of a plurality of power lines in the device that lead to the interface card. Each of the plurality of power lines is turned off by ramping down the power supply over a predetermined time period. For reasons similar to those discussed above, Applicants submit that Papa does not disclose or suggest these features of claim 17.

For at least these reasons, Applicants submit that the rejection of claims 11, 14, and 17 under 35 U.S.C. § 103(a) should be withdrawn.

Claims 2, 3, 8, 10, 12, 13, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Papa in view of Evoy. Applicants have reviewed Evoy, and submit that Evoy does not cure the above-mentioned deficiencies of Papa. Accordingly, at least by virtue of their dependency, either directly or indirectly, on one of claims 1, 11, and 17, the rejections of claims 2, 3, 8, 10, 12, 13, 18, and 19 should also be withdrawn.

Claims 4, 5, 9, 15, 16, 20, 21, 24, 25, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Papa in view of Wallach. Applicants respectfully traverse these rejections.

Regarding independent claim 21, this claim is directed to a hot-swappable physical interface card that includes, *inter alia,* a plurality of power supply lines through which power is received from a device, the device activating the plurality of power supply lines by ramping the power supplied to each one of the power supply lines in response to the device detecting

insertion of the physical interface card. For reasons similar to those discussed above, Applicants submit that Papa does not disclose or suggest these features of claim 21. Applicants have reviewed Wallach, and submit that Wallach fails to cure these deficiencies in Papa. Accordingly, neither Papa nor Wallach, either alone or in combination, disclose or suggest each of the features recited in claim 21.

Thus, Applicants submit that the rejection of claim 21 should be withdrawn. The rejection of claims 4, 5, 9, 15, 16, 20, 24, 25, and 27, at least by virtue of their dependency, either directly or indirectly, on one of claims 1, 11, or 21, should also be withdrawn.

Dependent claims 22, 23, and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Papa in view of Evoy and Wallach. Applicants submit that at least by virtue of their dependency on claim 21, the rejection of these claims is also improper and should be withdrawn.

New claims 28-31 depend from claims 1, 11, 17, and 21, respectively, and further define that the ramping of power recited in these claims is performed in a time period between about 5 to 20 milliseconds. None of the cited references disclose or suggest this feature.

In view of the foregoing amendments and remarks, Applicants submit that the claimed invention is neither anticipated nor rendered obvious in view of the references cited against this application. Applicants therefore request the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: October 2, 2003